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Marketable Studies

New York Streets Project

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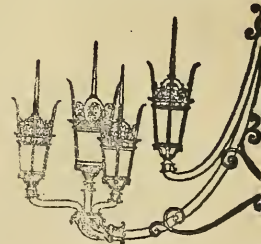
Kaus Sumner
gov. 44-471

- I. Observations of Economic Importance on the Marketability of the "New York Streets" Project.
- II. Surveys of Economic Factors Related to the Marketability of the "New York Streets" Project.
 - A. Prevailing Industrial Rents for Available Space in Selected Areas.
 - B. Competitive Vacant Land Sites of Comparable Size.
 - C. Central Artery Displacement.
 1. Comparison of new quarters with former locations for a representative group displaced by Central Artery.
 - D. Industrial Production in New Plants.
 - E. Building and Space costs for New Industrial Construction in the Boston Area.
- III. Conclusions

EXHIBITS

- A. Map - Industrial Rents in Selected Areas
- B. Map - Vacant Land Sites within Switching Limits
- C. Map - Central Artery Displacement
- D. Chart - Prevailing Industrial Rents for Available Space in Selected Areas
- E. Chart - Space Costs in New Industrial Construction

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I. Observations of Economic Importance on the Marketability of the
"New York Streets" Project

In order to evaluate the marketability of the land in the New York Streets area, this Authority has undertaken a series of studies to analyze the important economic factors and governmental activities which have a direct bearing on the marketability and demand for industrial land. Surveys were made of the vacant land available, current space rentals, new construction costs, the impact of the present and future displacement of industrial space resulting from the takings for the construction of the Central Artery and industrial production and operating costs in new plants.

It has been established and accepted generally that downtown operations have become uneconomic because of traffic congestion, lack of parking and off-street loading facilities, inadequate and obsolete buildings on narrow streets and high land coverage. The successful operations of many firms who have moved out of the downtown areas are directly attributable to:

1. the absence of congestion,
2. the use of modern plants with off-street loading and parking advantages,
3. the proximity to main highways or expressways.

Many of these firms who have relocated to outlying areas would not derive any appreciable benefits from being located close to the heart of the city. Hence, it was more profitable for these firms to relocate on inexpensive land in outlying areas or in cities with low tax rates.

There are many firms, however, whose operations would be more profitable in close-in locations regardless of the tax structure,

if suitable vacant land were available possessing the advantages similar to the outlying land such as lack of congestion, accessibility to main highways, off-street parking and loading etc., especially since it is true that it costs as much to build a new plant in the outlying areas as it does in the close-in sections. Many firms who fit this description have relocated in the outlying area because of the extreme shortage of suitable vacant land in close-in sections of Boston and because of the prohibitive cost of assembling land in these sections.

Boston has comparatively very little land left for either residential or industrial development. This fact was pointed out and emphasized in the Preliminary Report - 1950 - General Plan for Boston prepared by the Boston Planning Board. Speaking of business and industrial land use the report said:

"The real problem appears to be an insufficiency of space. In finding area for increased activity there are but three possibilities: present industrial sites, land now used for other purposes and vacant land areas. As this moment, Boston has little to offer in vacant lands for business use---. In Boston, as in most big cities, business development in the past required penetration of central residential districts, and this along with other factors has hastened the process of blight. Hence, at the fringes of the most important business centers there are areas which warrant consideration for the possible redevelopment with business and industry. Boston needs more spece for business and industry even if the expected increase in volume should fail to materialize. Many of the existing plants are obsolete and inefficient and must eventually be replaced. It is well known that modern design tends

toward much greater space requirements at the ground level than formerly. More areas will be needed not only for the rebuilding of individual plants, but also in the redesign of commercial and industrial areas as a whole, to allow for the widening of streets, public off-street parking, and other improvements. In addition, current and proposed highway and housing projects and the residential redevelopment contemplated in this General Plan will eliminate about 300 acres of land now in business and industrial use, or zoned for those purposes."

It is obvious, then, that it isn't the downtown land which is uneconomic per se but the unfavorable conditions which exist in downtown locations and the difficulty and prohibitive cost of assembling suitable land. Other things being equal such as size, use, sub-soil, locations, availability, accessibility, etc., all land would be equally valuable. It follows, therefore, that other things being equal, if the unfavorable conditions are removed from downtown land, that downtown operations will be equally profitable. Other things being equal except location, downtown land is more valuable because of its locational advantages. It follows also that other things being equal the closer land is situated to downtown, the more valuable it is; or conversely, the further away land is from downtown, the less valuable it is.

Boston is the center of a large Metropolitan area, and is the trading and business hub of New England. In terms of the Metropolitan area*, Boston has but 37% of the population and only 9.5% of the land area, yet it has:

* General Plan for Boston - Preliminary Report - Boston Planning Board 1950

81% of the wholesale trade employment,
56% of the retail trade employment,
56% of the service trade employment,
57% of the manufacturing employment,
60% of the government employment,
44% of the total taxable real property valuation.

The economic significance of the above facts in terms of the demand for land is obvious.

Boston is currently engaged in vast and extensive development activities in the improvement of its natural resources and physical plant. By legislative enactment, city departments and semi-public corporations created by the legislature have been authorized to borrow and expend millions of dollars for the construction of express and arterial highways, for the expansion and development of the port facilities, airport facilities, public transportation facilities, and for the erection ^{of} ~~and~~ off-street parking facilities.

The development programs of these agencies currently being undertaken will result in a tremendous economic impact on the future growth and development of Boston which in turn will be reflected in the demand for land in Boston.

A summary description of the development programs underway by various agencies follows:

The Airport Management Board.

Under the direction of this agency, the Logan International Airport has increased in size from 189 acres to over 2000 acres in the past few years. The airport Management Board has expended over 36 million dollars in the development of this airport. Governor's

Island and Apple Island have been levelled off and the area filled in from the existing airport to these points. Runways over 10,000 feet in length have been constructed. A huge new terminal and administration building has been constructed. At present a \$2,500,000 hanger is under construction. This is the only airport in the country with rapid transit facilities available. Domestic and international traffic and freight have been steadily increasing. For the Fiscal Year 1951-52, the International Operations showed an increase of 23% in passenger traffic, and 40% in freight.

The Port of Boston Authority

In 1945, \$20,000,000 was appropriated for expansion and improvement. Two piers were demolished and replaced with modern pier facilities at a cost of \$6,500,000. Another new pier and modern grain elevators were constructed at a cost of \$5,000,000. Two other piers have been recently demolished and are currently being replaced with modern facilities at a cost of \$9,500,000. Considerable land adjacent to the port facilities is being developed and sold to firms requiring port facilities only. The Castle Island Terminal is being improved at a cost of \$1,200,000. The Port Authority has extensive plans for several years, for a continuing program of modernizing piers and docks.

The Metropolitan Transit Authority.

This is a multi-million dollar transit system serving 14 cities and towns in the Metropolitan Boston area including all of Boston. The operating facilities include tunnels, rapid transit systems, elevated rapid transit, busses, trackless trolleys, and some street car facilities which are rapidly being replaced by trackless

trolleys and rapid transit extensions. In 1952, an extension of rapid transit was completed from Maverick Station (point of origin-Boston proper) to the Airport and Orient Heights at a cost of \$5,000,000. Currently, an extension of the same rapid transit line is being completed to the City of Revere at a cost of \$3,000,000. Plans have been completed for extending the rapid transit from Cambridge to the town of Arlington and to the Concord Turnpike. This line presently serves one extremity of Boston through to Cambridge.

The Department of Public Works, Commonwealth of Massachusetts

The Master Highway Plan of 1948 is being carried out by this department. The estimated cost in 1948 was \$338,000,000. The legislature authorized three bond issues - \$100,000,000 in 1949, \$100,000,000 in 1950 and \$200,000,000 in 1952 - to finance some of the projects listed in the Plan. Of this \$400,000,000 total, \$148,000,000 was allocated for the Metropolitan Boston Area of which \$71,000,000 is now under contract. The Boston section of the Plan (the Central Artery) is approximately one-third completed. Of the \$400,000,000 total for the Plan \$200,000,000 has been encumbered and the Circumferential Highway (Route 128) around Boston is substantially completed except for the southeast section and the northeast section.

The Massachusetts Turnpike Authority

The Massachusetts Turnpike Authority was created in 1952 to construct an east-west toll road for intra-state and interstate use. The legislature appropriated \$500,000 for plans to be prepared for the turnpike.

The Turnpike Authority has completed its studies and selected the route for the turnpike. A prospectus is being prepared for the bond issue. The proposed route will cost approximately \$200,000,000. Construction is expected to commence in 1954. The estimated completion date is 1956.

This turnpike will connect with the circumferential Highway for Metropolitan Boston and with the Central Artery in Boston. In this manner, intra-state and interstate commercial traffic from points west will flow freely into and out of downtown Boston.

The Board of Real Estate Commissioners. (a City of Boston Municipal Department)

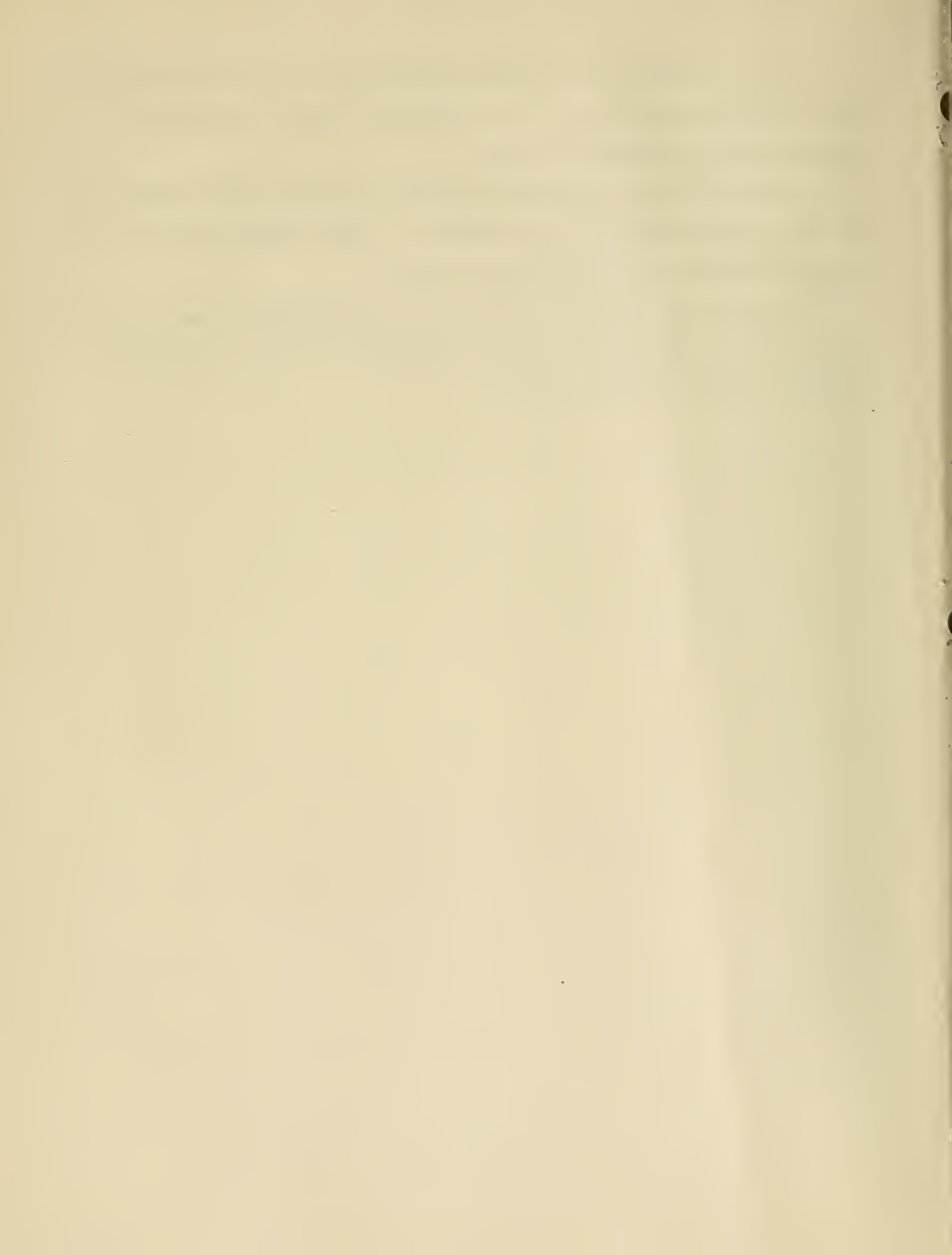
The legislature has authorized this commission to expend \$10,000,000 to provide off-street parking facilities. Under this program, the Real Estate Commission has constructed one municipal owned facility for 325 cars, which is leased to private firms for three year periods. Another facility for 700 cars was recently constructed by the highest bidder on a ground lease basis on land cleared by the Real Estate Commission. The Real Estate Commission executed a contract this month (September 1953) for a facility for 780 cars to be constructed by the highest bidder on land cleared by the Commission. This facility will be in operation in approximately six months.

Land has been acquired and cleared in another downtown section of Boston for a 200-car facility. Plans and specifications have been completed for the facility and the announcement for bid openings will be made shortly.

The Boston Traffic Commission and the Real Estate Commission are preparing plans for at least two more 700-car facilities in predetermined downtown locations.

The Real Estate Commission presently controls many large lots of city owned land which are leased for three month periods to the highest bidders for ground-level parking.

One suburban parking lot has been constructed by the commission for metered parking and plans are completed for three additional suburban metered parking lots.



A. Industrial Rents in Selected Areas

To set forth a clear picture of industrial and commercial rents in Boston, eight sample districts were selected in the Boston-Cambridge area. Over a period of six weeks the real estate section of two Boston papers, the "Globe and "Herald", were scanned for rentals. Field Surveys and inspections of listings were made into each of the districts to locate vacant space, and the principal brokers in the city contacted to obtain information on current listings in these areas. The districts selected, the boundaries and principal business or industry are detailed below:

- Area 1. Easterly side of Fort Point Channel to D Street, bounded on the south by Binford Street and on the north by the freight and express sheds on Northern Avenue. District contains large percentage of the wool trade, paper industry, food packing and processing houses;
- Area 2. Corner of Summer Street and Atlantic Avenue to Kneeland Street to Albany Street to Harvard Street to Washington Street to Essex Street to Chauncy Street to Bedford Street to Summer Street. Principal industries, leather, shoes, garment manufacturing and dry goods.
- Area 3. Corner of Summer Street and Atlantic Avenue to Oliver Street to Franklin Street to Arch Street to Summer Street to Atlantic Avenue. Area contains good percentage of graphic arts industry, printers, photo-engraving, paper firms and machinery.
- Area 4. India Street and Atlantic Avenue to Richmond Street to North Street to Merchants Row to State Street to India Street to Atlantic Avenue. This district is the center of the food industry, the wholesale market area, meat and meat processing houses, fruit and vegetable commission houses and wholesale grocers.
- Area 5. North Washington Street and Causeway Street to Merrimac Street to Portland Street to Hanover Street to Blackstone Street to North Washington Street to Causeway Street. Large concentrations of furniture, carpet and rug houses, appliance firms, electrical, plumbing and heating supply firms.

- Area 6. East Cambridge. Corner of Commercial and Munroe Street to Sixth Street to Binney Street to Ninth Street to Cambridge Street to Commercial Avenue to Monroe Street. Varied commercial and industrial district, steel and iron, candy, food processing, warehousing, trucking, electronics, etc.
- Area 7. District to the west and northwest of Massachusetts Institute of Technology, Putnam Avenue and Sydney Street - Massachusetts Avenue to Charles River Road, to Audrey Street to Putnam Avenue. Area devoted to appliances, food, trucking and wholesale distributors.
- Area 8. Boston and Albany Railroad line and Brookline Avenue to Kilmarnock Street to Boylston Street to Boston and Albany Railroad line.. Area has group of wholesale liquor distributors, automobile parts, tire and battery dealers, household appliance wholesalers and warehouses.

The number of rentals available in the period March 15, 1953 to April 30, 1953 are listed on Schedule "B". This does not purport to be a comprehensive study, but an effort was made to list each rental, excluding those where the floor area was less than 3000 square feet.

In this study this Agency could not find any sizeable amount of space in a modern, first-class building with platform loading, spur track, adequate off-street parking and loading facilities. This fact was confirmed in discussions with the leading brokers.

The majority of the space available in the downtown Boston area was in multi-story buildings, in crowded areas, in many cases in obsolete, inefficient structures .

The displacement caused by the Central Artery takings in the past two years accounts to a large measure for the lack of space in the downtown Boston area. Many of the firms, particularly those requiring 3000 square feet of space or less, moved to rentals as close to their former location as possible. The larger firms, with good credit and sound financial position, were in a position to rent better space or

to build for their own use. A separate study has been made on these firms and the findings presented in another section of this report.

In Area 1, the most space was found in wool warehouses. In the twenty-year period preceding World War I, the Boston Wharf Company constructed a large number of buildings in this area on both sides of Summer Street east of Fort Point Channel. This section is still the heart of the wool district with the first- and second-floor space used for office and showroom purposes, with the rest of the building generally devoted to warehousing. Average rentals are about 60¢ per foot, excluding first floor space which average about \$1.25 per foot.

The leather and shoe district contains mill type structures - for the most part with brick load-bearing walls and wooden floors. The first floors are generally used for showroom and office space - upper floors for warehousing and manufacturing. The north-south streets, Atlantic Avenue, Lincoln and South Street are wide streets with heavy traffic, but most of the east-west streets are narrow and crowded. Traffic conditions in this area are bad and most streets have been made one-way by the Traffic Commission. Average rents on upper floors run between 60¢ and 75¢ per foot, depending upon facilities, with first- and second-floor space about \$1.25, but in some instances running as high as \$2.25 per foot for a desirable location. The latest announcement on the location of the Central Artery will cut a swath through this area.

In Area 3, much of the space available in 1950 and 1951 has been taken up by firms displaced by Central Artery takings and at somewhat higher rentals than had been paid previously. In both areas two and three, there has been considerable demolition in the past fifteen years to create off-street parking facilities, both by the City of Boston and



private parking interests. In several instances, firms have demolished obsolete structures to provide off-street parking for employees and customers.

Space that was available in Areas 4 and 5 has been taken up by firms displaced by the Central Artery. Traffic conditions in Area 4 are undoubtedly the worst in the city. This is Faneuil Hall and Quincy Market, the center of the wholesale market district. There are converging streets on all sides of this section. Hand carts, horse-drawn teams and peddlers using two-wheel carts add to the congestion. In addition to the heavy volume of traffic in the area, the Summer Tunnel draws thousands of north-south vehicles through this section each day. Studies made by the U. S. Department of Agriculture, Marketing and Research Facilities Division have established the extreme difficulties of doing business in this area due to the heavy traffic. In Area 5 the majority of the buildings are about 80 years old, on small lots, and of mill type construction.

The East Cambridge area is an intense, diversified industrial district with high demand and very little space available. This area has had most of its vacant land taken up in the post-war period at prices up to \$2.00 per foot. Practically all of the area is served by rail, streets are wide and surface and rapid transit facilities good. Rents here reflect the desirability of the location; also, the lack of space reflects the demand and generally good business environment.

The demand in Area 7 has been high with no sizeable space available. There has been some new construction in this section and as in the East Cambridge area, demand has been good for anything offered.

The Brookline Avenue section, Area 8, offers good identity and transportation facilities. There are practically no sizeable tracts of land available here for building and the greater part of this area was built up in the past 40 years. All rentals found were in good buildings, with heavy floor loads.

The latest listing of manufacturing space for sale or lease available in Massachusetts, prepared by the Massachusetts Development and Industrial Commission contains but twenty-seven locations in the entire Boston area, four of which are for sale only. This listing does not necessarily include all space available since some properties are exclusive listings with brokers and real estate firms. Of a total of 1,627,792 square feet of space, 900,000 square feet are in warehouse and storage buildings, and 116,500 in ship repair and dock buildings. The greater part of the remaining 611,292 square feet are in loft buildings and most of it on the upper floors.

The type of space which is planned in the New York Streets Project Area is currently not available in Boston. Space in modern buildings with adequate light, heavy floor load, platform loading, adequate passenger and freight elevators, off-street loading and parking facilities is currently renting in the \$1.25 to \$1.50 per foot bracket. At this figure new construction on one- and two-story buildings can be built and leased profitably.

Many firms who have moved from locations which they had been associated with for generations have found the move profitable. They had tolerated crowded quarters in inefficient, obsolete buildings with narrow streets, heavy traffic, street loading, no parking facilities until forced to move. Their new quarters, while more expensive to rent, have proven far more efficient and the economies effected in operation have reduced, and in many instances cancelled, the increase in rent.



- b. South Boston on Dorchester Avenue, near Andrew Square, about 300,000 square feet of fairly level land, rectangular in shape, good frontage, good identity, fair bottom, rail in the rear, utilities available, cannot be sub-divided, being held at a firm price of \$1 per foot.
- c. South Boston on southeast side of Dorchester Avenue a parcel of about 280,000 square feet of low-lying land, fairly level, poor bottom, rail available, identity fair, utilities adjacent, being held for 60c per foot.
- d. South Boston - adjacent to "C"-parcel of about 90,000 square feet of fairly level land, rail, poor bottom, fair identity, formerly used as a coal yard, asking 60¢ per foot. The proposed route of the Southeast Expressway passes through parcels "C" and "D".
- e. Dorchester - off Boston Street - between Southampton Street and Massachusetts Avenue a tract of about 300,000 square feet - grade varies about 10' rail available, poor bottom, fair identity, price about 50¢ per foot. This parcel close to large new development for meat packers and meat processing firms who are moving into area to northwest.
- f. South Boston on the easterly side of Mt. Vernon Street, tract of about 23 acres, site formerly used for Title V temporary housing. Approximately 800,000' of filled land and 200,000 of marsh land. Area is level and surfaced streets, utilities, excluding gas, were brought in to service the temporary dwellings erected in 1946 and subsequently demolished. Bottom is fair, identity

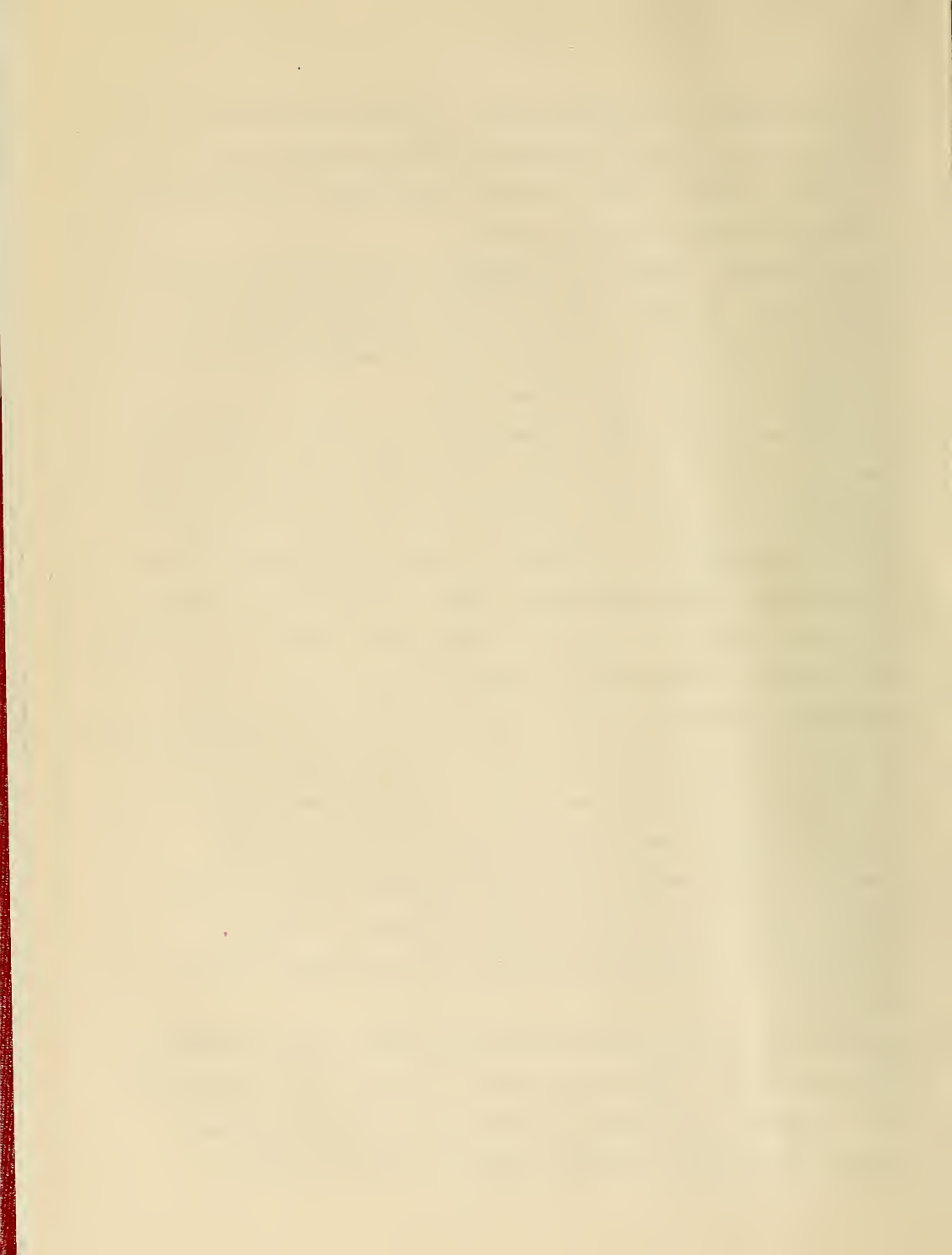
good-owner asking 50¢ a foot and unwilling to sub-divide.

- g. In Dorchester on Old Colony Parkway, a tract of about 350,000 square feet with over 1000' frontage, of partially filled land and salt water marsh. Rail available in rear, identity good, bottom poor. Land has changed hands in past year - presently being held for 60¢ per foot. Several top name concerns have acquired and developed land in this area in the past few years. Salada Tea, Westinghouse, General Tire, First National Stores and National Recording and Statistical.
- h. Dorchester - adjacent to "G" but with no frontage on the Parkway - a tract of 225,000 square feet. Fairly level, poor bottom, fair identity, present owner asking 50¢ per foot. The proposed route of the Southeast Expressway will pass through the westerly end of parcels "G" and "H".
- i. In Dorchester off Auckland Street, about 200,000 square feet of level land with spur track, difficult to sub-divide, no frontage, fair identity, sub-soil fair, utilities can be brought in, owner holding for 30¢ per foot.
- j. In Dorchester between West Selden Street and the Midland Division of the New Haven Railroad a tract of about 500,000 square feet. Parcel is rectangular in shape with over 1000' frontage on rail, but has no street frontage. Land is fairly level but several feet below grade of nearby streets and the railroad. Sub-soil conditions fair, identity poor, utilities and streets would have to be brought in - owner asking 30¢ per foot.
- k. In Brighton on northerly side of Ashford Street, near Babcock Street, a parcel of 105,000 square feet, rectangular in shape

with 480' frontage - fairly level - good bottom - fair identity owner holding for \$1.75 per foot. Rail may be brought across Ashford Street.

1. In Brighton on southerly side of Ashford Street near Babcock Street - level parcel of 88,000 square feet - rail in rear - good bottom - fair identity - utilities available - owner holding for \$1.50 per foot.
- m. In Brighton - Western Avenue and Soldier's Field Road, a parcel of 700,000 square feet. All utilities and rail available - excellent identity - fairly good bottom. Parcel is approximately 700' x 1000'. Frontage on Soldier's Field Road available @ \$2.00 per foot with depth of 200', balance of land @ \$1 per foot. In this general area there has been a good deal of new industrial building in the past six years.
- n. In Brighton on Soldier's Field Road, 100,000 square feet, no rail, fair bottom, fair identity. Present price of land about \$1.00 per foot. In the past few years several new plants have been erected in this vicinity, WBZ-TV, Apparatus Service Company, General Electric (X-Ray), International Equipment Company, Doelcam, Inc., Hudson Motors and Harrison Hosiery.
- o. In West Cambridge off Concord Avenue near Route 2, utilities and rail available, good identity, poor to fair bottom. About 800,000 square feet of land still available after successful development in recent years. Boston and Maine Railroad holding most of this land. The land with good bottom and close to the existing streets priced at 65-75¢ per foot, land in the rear with poor bottom available at 30¢ per foot.

- p. West Cambridge - off Concord Avenue - between Fawcett Street and Moulton Street a tract of about 250,000 square feet, rail and utilities available, fair identity, good bottom, no frontage on Concord Avenue asking 85¢ per foot.
- q. West Cambridge, Alewife Brook Parkway, a tract of about 530,000 square feet, including a shallow pond of about 140,000 square feet, good bottom, rail on land, utilities available, will not sub-divide, owner asking 50¢ per foot.
- r. Charlestown, Mystic Wharf, formerly used by Boston & Maine Railroad as coal dock, about 600,000 square feet, half solid land, half piles, rail on wharf, utilities available, facilities for deep water vessels, no price set, probably about \$1.25 per foot.
- s. Charlestown - Rutherford Avenue, tract of about 200,000 square feet, rail and all utilities available, fair bottom, good identity, land recently changed hands, priced at \$1 per foot.
- t. Charlestown, Medford Street, about 650,000 sq. ft. of land on Mystic River, rail and utilities available, good bottom and identity, on tidewater, berths for two ships - owned by Revere Sugar Refining Company, land currently priced at \$1.25 per foot.
- u. Charlestown, off Medford Street near Sullivan Square - about 210,000 square feet, rail utilities available, no street frontage, fair bottom, fair identity, level, priced at 80¢ per foot.
- v. Charlestown - behind Freight House "A" of the Boston and Maine Railroad, about 100,000 square feet of land, rail, no utilities, fair identity, good bottom, presently being used for ground storage by railroad, currently priced at \$1.00 per foot.



- w. Medford, Mystic Valley Parkway and Revere Beach Parkway a tract of about 40 acres. Rail and utilities available, good identity, bottom poor, saltwater marsh. Whole area available at 25¢ per foot, subject to non-retail use.
- x. Chelsea off Eastern Avenue, a tract of about 450,000 square feet of vacant land, rail and utilities available, poor identity, fair bottom, oil farm area, asking 50¢ per foot.
- y. Chelsea, Eastern Avenue, a tract of about 850,000 square feet, oil farm area, poor identity, poor bottom, rail and utilities available, priced at 50¢ per foot.

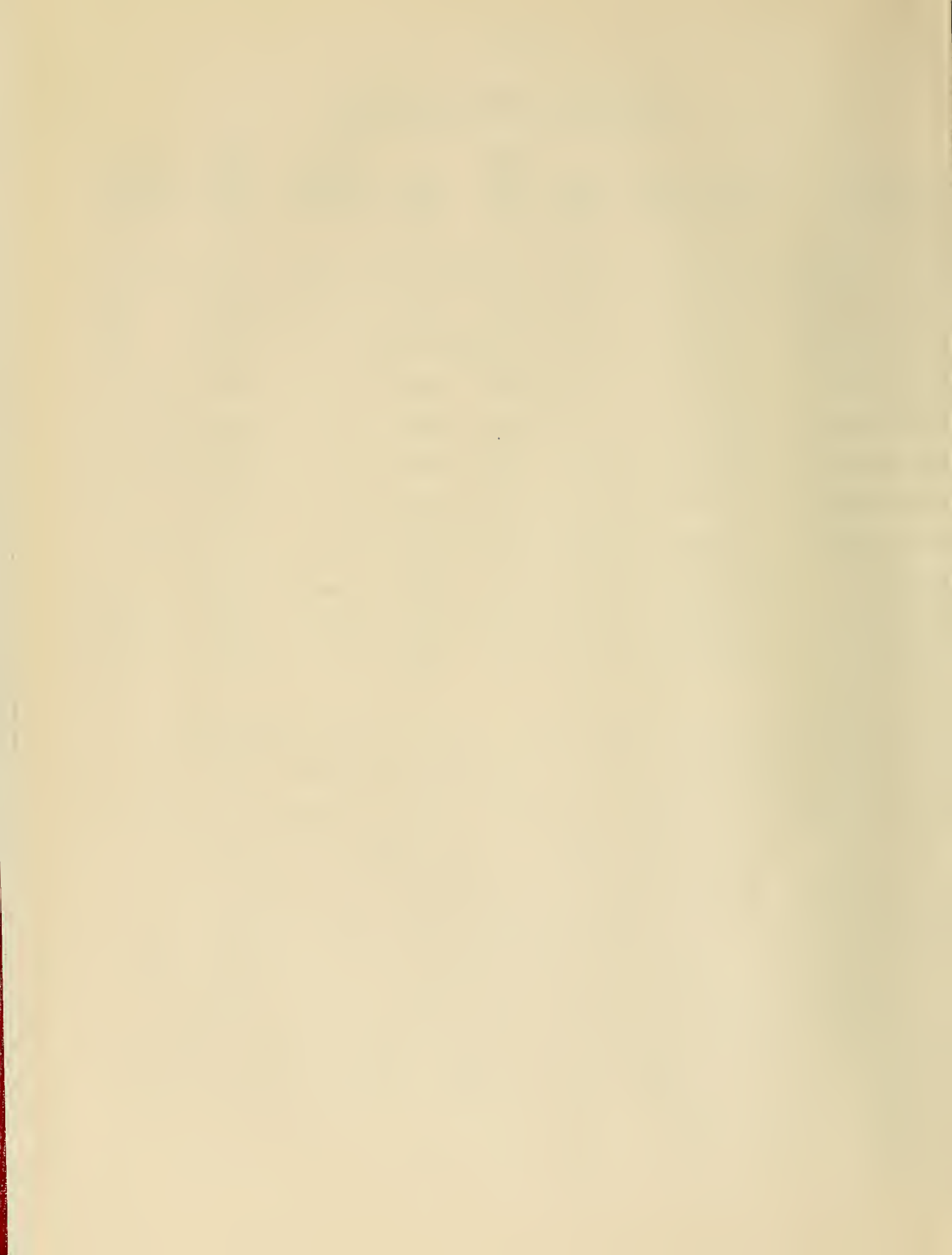
VACANT LAND SITES

<u>CODE</u>	<u>LOCATION</u>	<u>AREA SQUARE FEET</u>	<u>RAIL</u>	<u>SUB-SOIL</u>	<u>TOPO</u>	<u>SUB- DIVIDE</u>	<u>1952 TAX RATE</u>	<u>PRICE SQ. FT.</u>	
A	South Boston	1,400,000	Yes	Poor	Level	No	66.80	1.00	<i>Disc</i>
B	South Boston	300,000	Yes	Fair	Level	No	66.80	1.00	<i>Transp</i>
C	South Boston	280,000	Yes	Poor	Level	No	66.80	.60	
D	South Boston	90,000	Yes	Poor	Level	No	66.80	.60	<i>fair</i>
E	Dorchester	300,000	Yes	Poor	Fair.Lev.	No	66.80	.50	
F	South Boston	1,000,000	Yes	Fair	Level	No	66.80	.50	
G	Dorchester	350,000	Yes	Poor	Fair.Lev.	No	66.80	.60	
H	Dorchester	220,000	Yes	Poor	Fair.Lev.	No	66.80	.50	
I	Dorchester	200,000	Yes	Poor	Level	No	66.80	.30	
J	Dorchester	500,000	Yes	Poor	Fair.Lev.	Yes	66.80	.30	
K	Brighton	105,000	Yes	Good	Fair.Lev.	No	66.80	1.75	
L	Brighton	88,000	Yes	Good	Level	No	66.80	1.50	
M	Brighton	700,000	Yes	Fair	Level	Yes	66.80	\$1 - \$2	

VACANT LAND SITES (CONTINUED)

<u>ODE</u>	<u>LOCATION</u>	<u>SQUARE FEET</u>	<u>RAIL</u>	<u>SUB-SOIL</u>	<u>TOPO</u>	<u>SUB-DIVIDE</u>	<u>1952 TAX RATE</u>	<u>PRICE SQ. FT.</u>
N	Brighton	100,000	No	Fair	Level	No	66.80	1.00
O	West Cambridge	800,000	Yes	Poor	Fair.Lev.	Yes	52.80	30¢-75¢
P	West Cambridge	250,000	Yes	Good	Level	No	52.80	85¢
Q	West Cambridge	530,000	Yes	Good	Fair.Lev.	No	52.80	50¢
R	Charlestown	600,000	Yes	Good	Level	No	66.80	1.25
S	Charlestown	200,000	Yes	Good	Level	No	66.80	1.00
T	Charlestown	650,000	Yes	Good	Level	No	66.80	1.25
U	Charlestown	210,000	Yes	Fair	Level	No	66.80	.80
V	Charlestown	100,000	Yes	Good	Level	No	66.80	1.00
W	Medford	1,700,000	Yes	Poor	Level	Yes	53.00	.25
	Chelsea	450,000	Yes	Fair	Level	No	63.00	.50
Y	Chelsea	850,000	Yes	Poor	Level	No	63.00	.50

In the past two years a large tract of some 70 acres has been developed between Massachusetts Avenue and Southampton Street. This land was held principally by the New Haven Railroad and for many years priced at \$1 per foot. With the displacement of a large part of the meat processing industry in downtown Boston by the Central Artery takings, the New Haven and the Boston and Maine Railroads entered into spirited competition to relocate the business on their lines - and on railroad owned land. The New Haven road has brought most of the displaced firms into the Massachusetts Avenue district to the mutual benefit of both. Subject to frontage, sub-soil conditions and area, this land was sold for between 50¢ and 70¢ per square foot.



Most of the firms did not have rail facilities at their former locations and had to truck, at considerable expense, the contents of the meat cars from team tracks on Northern Avenue, South Boston and Rutherford Avenue, Charlestown to the market district.

Among those who have built or who are currently building in this area are New England Provision Company, Columbia Packing Company, Old Colony Packing Company, Bornstein and Company, Central Beef Company, Omaha Packing Company, Swift & Company, Goren Packing Company, Samuel M. Gertman Company, Massachusetts Wholesale Food Terminal and the Southampton Wholesale Food Terminal. The latter two are in the nature of co-operatives. One of these buildings is to be a structure 800' long and 100' wide, divided into bays to accommodate 26 small dealers. It is estimated that the total new construction in the meat area will amount to over \$14,000,000. Most of the land in this area that remains is ear-marked for the meat and meat processing industry. Parcels "B" and "E" are close to this area and may eventually be developed in connection with the Massachusetts - Southampton Street district.

Parcel A, located close to the Northern Avenue piers is being held by the Port Authority and restricted for development by industry that will benefit the port. This qualification would not apply to many of the firms or industries that would be customers for the New York Streets land.

The proposed route of the Southeast Expressway will pass through parcels "C" and "D", also "G" and "H". In the vicinity of the latter two, there has been a good deal of activity in the past three years. Several large firms have built in this area, utilizing the most desirable land. The remaining land has been priced higher and is not as desirable.

Parcel I is an irregular shaped piece to the west of the Old Colony Division of the New Haven Railroad without frontage on an adequate street - but with fair identity from the MTA and Old Colony Railroad lines. Streets in this area are inadequate for the heavy traffic currently passing through.

On the Midland Division of the New Haven Railroad Parcel "J" is low land with no street frontage, utilities and streets would have to be brought in and site improvement costs would be high.

In the Brighton area there has been considerable activity in the post war period, and land prices have enjoyed a substantial rise. The Allis-Chalmers Company paid over \$1.30 per foot for 88,000 square feet not long ago, and present asking prices are above that figure for comparable land. The more desirable locations on Soldier's Field Road and in the vicinity of North Beacon and Market Streets have been taken. It is understood that an option was recently taken on about 280,000 square feet of Parcel M. This area is about 4 miles out of the downtown district, served by street cars and buses from points on the rapid transit system.

At West Cambridge, in the vicinity of Parcels O, P and Q., there has been a good deal of new construction in the past six years. This area is about five miles northwest of downtown Boston and served by the Boston and Maine Railroad. Surface transportation - buses and trackless trolleys connect with the rapid transit line at Harvard Square and Central Square in Cambridge. The larger part of "O" is poor land probably requiring a minimum of 35' piles for even a single story building. Parcel Q is the former location of the New England

Brick Company and contains a rather sizeable old clay pit.

Parcels "R" "T" "N" and "V" are tidewater locations with existing berths and rail facilities suitable for heavy industry.

The land in Medford, Parcel "W" is a low, broad expanse of tide-water flats with poor bottom. Due to its location at the junction of two heavily traveled routes it probably is being held with the hope of development for retail or shopping purposes.

The two locations in Chelsea are in the oil farm area of Chelsea Creek - with poor transportation facilities, poor bottom and identity.

The advantages of close intown location, offered in the New York Streets are not available in any of the above sites. The site utilities and adequate streets, proximity to the downtown area, excellent rapid transit and surface transportation and arterial connections, good identity and bottom are advantages not available in any of the competitive sites with the possible exception of the Port Authority land, and this is being held for special purpose development. The Brighton area, which has seen a good deal of activity and new construction, would be highly competitive, as the land prices indicate, however it does not have the in-town attractiveness of the South End site or the arterial highway proximity.

C. Central Artery Displacement

In the past three years the downtown business district of Boston has undergone the greatest change since the great fire of 1872. The land takings by the Commonwealth for the construction of the Central Artery have displaced hundreds of firms from the Charles River to Fort Hill Square, at Oliver and High Streets. The Boston Planning Board has made a survey of the displacement in the aforementioned area. Their findings show a total floor area of 2,597,000 square feet eliminated with the breakdown as follows, using the 1950 Census Classification of Business and Industry:

		<u>Sq. Ft. of Floor Area</u>
Construction		17,000
Manufacturing:		866,000
Durable	323,000	
Non-durable	543,000	
Transportation		36,000
Wholesale and retail		1,233,000
Financial-Insurance-Real Estate		10,000
Business and repairing		122,000
Personal services		13,000
Entertainment and Recreation		2,000
Professional and Related Services		43,000
Public Administration		5,000
Unknown		<u>250,000</u>
		2,957,000

Up to the present time, no definite decision has been made on the exact location of the Artery beyond Oliver Street. The route originally suggested by the State Department of Public Works met with



strong opposition from many sources; the Mayor of Boston ; the Chamber of Commerce; and the shoe and leather interests. It would eliminate about \$9,000,000 of assessed valuations between Oliver Street and Broadway, and wipe out substantial portions of the shoe, leather, printing and garment industries. Currently, the Boston Planning Board and the Public Works Department are making surveys in the hope of preparing a case for an alternate route which would reduce the impact of business displacement and the amount of ratables to be taken. Regardless of which route is ultimately selected there will be a sizeable displacement of business as the Artery extends southward from its present point.

The impact of the Artery takings has had far reaching ^e affects and has set in motion some trends which are discernable at this time but not conclusive. The smaller firms, those requiring 3000 square feet of floor area or less, spilled over into nearby areas, as close as possible to their old locations. This created a heavy demand for almost any type of space, and has used up a great deal of the available floor area in the downtown district. Many small firms went out of business. Some national or regional enterprises, that had branch offices or plants wiped out, affected consolidations with nearby installations of the parent company. But many of the larger firms, strong financially and with good credit, moved into new plants, designed and built to fit their requirements. Many other firms whose properties were not touched by the Artery takings, have elected to follow the others and are leaving old buildings for new ones. The development of the new Boston Meat Area in the Massachusetts Avenue - Southampton Street district is an example of this movement.

Provided that there is no drastic reduction in the current high rate of business and employment in industry, many real estate, financial and construction sources believe there will be no slackening in new plan construction. The experiences of the firms who have moved into new quarters, who discovered that the advantages accruing to them offset the dollar difference in rent, will result in competitors following along into new construction.

To examine this displacement problem this Division compiled a list of all owners, tenants and lessees displaced by Central Artery takings, from the records of the Right-of-Way Division of the State Department of Public Works. From this list, a representative group of firms was selected, consisting of the larger organizations, sound financially and with good credit rating, who would be in a position to provide new plant for their operations, or to lease adequate space in existing structures. Information regarding the space formerly occupied, facilities, rent or cost of ownership, and floor area was obtained. Comparisons were made with the new location to determine the advantages or disadvantages. The owners or managers were interviewed to get the full results of the change on the firms operations.

The firms contacted in this survey are listed separately and the locations "before" and "after" are shown on the map Exhibit "C".

Generally speaking, most firms were extremely reluctant to move from their former quarters, fearing that they would be placed in a poorer competitive position as a result of higher costs of operation and being located elsewhere.

In 1950 the U.S. Department of Agriculture, Production and Marketing Division, Marketing and Facilities Research Branch made a study of

the wholesale produce market facilities in Boston. It strongly recommended the creation of a new wholesale food market area to combine the perishable food industry into one integrated area. As a result of this study the General Court of the Commonwealth created the Massachusetts Market Authority, an agency to undertake the development of a new market district. Principally due to uncertainty of financing, the Market Authority was unsuccessful in its efforts to fulfill the objectives set forth in the report. However, other interests, chiefly the New Haven Railroad and two engineering firms, succeeded in convincing the meat packing and processing firms that the benefits of a new location, outlined in the Department of Agriculture report, could be achieved with private financing and railroad co-operation. As a result, some \$14,000,000 of new construction is taking place in the Massachusetts Avenue - Southampton Street area and the majority of Boston's meat processing firms will be located there. Thirteen of the larger firms are constructing their own buildings, and about 40 of the smaller firms are going into two large buildings under a co-operative plan. It is believed that other firms will follow this group to the new area. Qualified people in the meat processing industry feel certain that the economies effected with a modern plant, with increased production through a properly engineered lay-out, will place competitors in old, inefficient buildings at a distinct disadvantage. The margin of net profit on dollar volume is low in this industry, and a fraction of a cent in cost per pound of product may be the difference between successful operation and failure. Several of the firms moving to the new area were not affected by the Artery takings, but believed that the relocation was necessary to remain in a competitive position with firms who were

obliged to move. Currently, it is estimated that the assessed value of new construction by the meat processing industry will be far in excess of the assessments on the property they previously occupied in the downtown market district.

Both of the dairy products firms who were interviewed are happy in their new locations, and have effected savings in trucking, labor, storage and handling charges that have made the move a profitable one.

Two meat firms selected for this study, Bornstein & Company and the Central Beef Company have not completed their new buildings and comparative figures are not available. However, it is believed that their experiences will be similar to that of the New England Provision Company and the Columbia Packing Company. Another firm selected, Batchelder-Snyder Company, refused flatly to discuss their experiences with a representative of this Authority. Rather than move to new quarters, this firm acquired space close to their former location, in an old building. Competitors in the industry have said this was a mistake and that the firm's volume of business has slumped.

Of the eight firms interviewed in this study, six said their only regret was that the relocation had not been made earlier. Of this group, those who went into new construction pointed out that their construction costs would have been but 35 to 45% of the 1951-52 figure if the move had been made in 1940 or 1941 and the new plants would have had a substantial increase in value, along with enjoying a lower assessment.



Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	Thompson-Winchester Company	
Address	201-205 State St.	1295-1299 Boylston St.
Business	Hotel & Restaurant Supplies	
Floor Area Occupied	78,000 sq. ft.	79,000 sq. ft.
No. of Floors	7 plus basement	2 plus basement
Floor Load	-125	250+
Stud	11'	14'
Elevators	3 freight	None
Rail	No	No
Heated	1st 3 floors	Yes
Platform loading	Yes	Yes
Rent per sq. ft.	50¢	59¢
Sprinkler	No	Yes

Remarks: Dollar difference in rent amounts to increase of \$7600 per annum. Firm occupied three buildings on State Street - two of which they owned - one rented. Figure of 50¢ per foot shown on above table was estimated by firm. Functionally, present quarters are far superior to State Street properties. Present location was purchased in 1951 and firm spread the move over a period of eight months from October of 1951 to May 1952. Move was very expensive and operations during the period of move difficult. Firm was placed in tight position financially as result of move, acquisition of new building and the failure to settle with the State on two properties on State Street.

(Over)

Firm was reluctant to move to any location out of the downtown area - but had to settle on Boylston Street. They lost a good deal of waterfront and market district business, and for the first year, their retail sales slumped. However, new accounts have been acquired in present area, and their retail showrooms are far more attractive on Boylston Street and in time should reflect in higher sales. Present building was formerly headquarters for the New England distributor of Hudson Motor Cars - has wide ramps leading to basement and second floor. Trucks may be driven to any section of three floors, affording substantial savings in labor and handling of stock. Firm has large section of second floor devoted to fabricating sheet metal tables, cabinets, benches, etc., for institutional and hotel trade. Heavy floor load and high stud permits more compact storage. Insurance costs are a great deal lower in present quarters. There are two vacant paved lots, totaling about 20,000 sq. ft. on the easterly side of the building. One lot, fronting on Boylston Street is leased to a used car dealer; and the rear lot is used for employee and customer off-street parking. The latter is sublet to a parking operator for nights, Saturdays and holidays to fill the demand created by crowds attending games at Fenway Park, located nearby.

Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	Columbia Packing Company	
Address	155 Blackstone St. 155 Southampton St.	
Business	Meat Products	
Floor Area Occupied	29,200 sq. ft.	55,000 sq. ft.
No. of Floors	5	2
Floor Load	-125	250+
Stud	10'	12'
Elevators	4	1
Rail	No	Yes
Heated	Yes	Yes-Air Conditioned
Platform loading	No	Yes
Rent per sq. ft.	20¢	\$1.20
Sprinkler	No	Yes

Remarks: In its old location in the market area, this firm occupied space in seven different buildings, all adjacent and contiguous. In no building did they have over 6500' of floor area and did not have every floor in every building. All the buildings were old, 65 to 80 years, and of milltype Construction and terribly inadequate for a rapidly expanding firm. This company only started in business in 1946, and despite being in a highly competitive field with a small profit margin, reached \$7,000,000 in annual sales in 1952. All of the problems inherent to operating in the downtown market district were present, obsolete, inefficient building, on street loading and receiving, no rail siding,

heavy traffic congestion, difficulties in maintaining low temperatures in refrigerators due to structural conditions in old buildings, etc.

Mr. Murray Sherman, General Manager of Columbia, explained that the present building is larger than their current needs, 56,000 sq. ft. as against 29,200 in the market area, but that if their rate of expansion continues at anywhere near what they have enjoyed in recent years, the new building will be inadequate in about five years. The new plant is two story, with offices, locker rooms, lunch room and dry storage on the second floor, and the entire first floor devoted to production work, receiving, shipping and sales. It is first class construction throughout, set on caissons, completely air-conditioned and sprinkled. The power plant and the general maintenance space is at ground level to the rear and one side of the main building. The plant has a railroad siding in the rear with space at one end for two truck docks. On the opposite side of the building the shipping platform has space for 22 trucks, with the shelter extending about 5 feet beyond the edge of the platform. The new location has afforded better identity, vastly improved receiving and shipping operations with better stock control, pilforage and theft reduced to practically nil, elimination of spoilage and loss of product due to failure to maintain temperatures in refrigerators, greatly increased efficiency in manufacturing as a result of a well engineered plant. Handling meat from the team tracks to the old plant cost about \$45 per car and the firm handles about 10 cars per week. The facilities available to the employees, modern locker rooms and showers, lunch room, off-street parking, etc., cannot be spelled out in dollars and cents but have been reflected in morale.

Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	Land-O-Lakes Creameries	
Address	84 North Street	167 Albany St., Camb.
Business	Butter - eggs and poultry	
Floor Area Occupied	11,500 square feet	7,500 square feet
No. of Floors	6 plus basement	1 plus office in 2nd
Floor Load	-100	250+
Stud	12'	14'
Elevators	1 freight	1 freight
Rail	No	Yes
Heated	Yes	Yes
Platform loading	No	Yes
Rent per sq. ft.	75¢	\$1.00
Sprinkler	No	Yes

Remarks: This is a local branch of a large nation-wide co-operative. Now operating in less space and doing a larger volume of business. In former location firm did not have proper facilities - had to rent additional refrigerated space in Quincy Cold Storage Warehouse - trucking costs expensive - traffic congestion - street loading - low floor load in old building - all combined to increase costs of operation. New location affords rail siding, adequate refrigeration - platform loading - higher stud and heavy floor load, off-street parking, with a saving of about \$1100 per annum in rent. Branch manager said that firm was anxious to go into new proposed Market Area back in 1951, even if

heavy traffic congestion, difficulties in maintaining low temperatures in refrigerators due to structural conditions in old buildings, etc.

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Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	Land-O-Lakes Creameries	
Address	84 North Street	167 Albany St., Camb.
Business	Butter - eggs and poultry	
Floor Area Occupied	11,500 square feet	7,500 square feet
No. of Floors	6 plus basement	1 plus office in 2nd
Floor Load	-100	250+
Stud	12'	14'
Elevators	1 freight	1 freight
Rail	No	Yes
Heated	Yes	Yes
Platform loading	No	Yes
Rent per sq. ft.	75¢	\$1.00
Sprinkler	No	Yes

Remarks: This is a local branch of a large nation-wide co-operative. Now operating in less space and doing a larger volume of business. In former location firm did not have proper facilities - had to rent additional refrigerated space in Quincy Cold Storage Warehouse - trucking costs expensive - traffic congestion - street loading - low floor load in old building - all combined to increase costs of operation. New location affords rail siding, adequate refrigeration - platform loading - higher stud and heavy floor load, off-street parking, with a saving of about \$1100 per annum in rent. Branch manager said that firm was anxious to go into new proposed Market Area back in 1951, even if

space were to cost up to \$1.75 per foot. They felt that anything over that rental would be too high. Present deal was a fortunate one - it had refrigerated space that required some alteration and repair-permitted receiving by rail - reduced insurance costs - and their volume has not declined as a result of moving from the downtown area. Some business to the south and southwest of Boston was lost, but new accounts to the west and north of the city have been obtained. Firm is very happy in new location.

Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	La Touraine Coffee Company	
Address	54 India Street	178 Atlantic Avenue
Business	Coffee - roasting and packaging	
Floor Area Occupied	20,000 sq. ft.	20,000 sq. ft.
No. of Floors	2 plus basement	1 plus basement
Floor Load	-150	150
Stud	10'	10'
Elevators	1 passenger 4 freight	3 passenger 2 freight
Rail	No	Yes
Heated	Yes	Yes
Platform loading	Yes	Yes
Rent per sq. ft.	50¢	75¢
Sprinkler	Yes	Yes

Remarks: Dollar difference in rent = increase of \$5,000. The main building of this firm is located at 291 Atlantic Avenue, the space on the India Street building was used for storage and other purposes, and the balance leased to tenants. Mr. Mason of LaTouraine said that when the threat of dislocation by Central Artery takings appeared, the firm contemplated moving to a new building. The final decision on the route of the Artery took the auxiliary building and left the main plant. Adequate space was secured in a nearby building on the other side of Atlantic Avenue and plans for new construction have been temporarily shelved. The new space is in a better building, with rail facilities. However, it is on the other side of Atlantic Avenue, one of the busiest traffic (over)

routes in the city.

Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	William Gens Company	
Address	52 Purchase St.	375 Northampton Street
Business	Electrical Engineer and Contractors	
Floor Area Occupied	3800 sq. ft.	3000 sq.ft.
No. of Floors	1 (2d)	1
Floor Load	- 100	250 +
Stud	13'	13½'
Elevators	1 freight	none
Rail	no	no
Heated	yes	yes
Platform loading	no	yes
Rent per sq. ft.	65¢	95¢
Sprinkler	no	yes

Remarks: Dollar difference in rent = increase of \$480. This firm is owned by Mr. Murray Gens, brother of Paul Gens of Loman Electric Supply Company. Two firms had shared Purchase Street building and went in jointly on new building. Firm is very happy in new location, has well appointed office, acoustic ceiling, excellent lighting, etc. Locating out of downtown area with minimum of traffic and noise, adequate parking facilities, lower insurance costs and a clean, modern building has made far more pleasant working conditions. This firm had made inquiries about obtaining land in the New York Streets area in 1951 from the City and private parties, but could not assemble a proper parcel.

Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	Fairmount Foods Company	
Address	35-37 Commercial St. Boston	327 Mystic Ave. Medford
Business	Dairy products - frozen foods	
Floor Area Occupied	17,500 sq. ft.	15,000 sq.ft.
No. of Floors	6 plus basemt.	one
Floor Load	-125 lbs	250 †
Stud	12'	18'
Elevators	1 freight	none
Rail	no	no
Heated	yes	yes & air cond.
Platform loading	no	yes
Rent per sq. ft.	60¢	88¢
Sprinkler	no	yes

Remarks: Branch office and distributing plant of a national firm with headquarters in Nebraska. Building was originally built by a battery manufacturer in 1947, acquired by Fairmount Foods in 1951 for \$90,000 and some \$30,000 spent on alterations. Property then sold to Prudential Life Insurance Company and Fairmount signed a 20-year lease. Fairmount had some major changes in building, built in several large refrigerated rooms and freezers. Plant has arched wooden roof - very high stud - masonry walls - shipping platform in rear - receiving platform on side - parking space on side and rear of building - set back about 40 feet - and well landscaped. Firm was reluctant to move out of the downtown

market area - could not find suitable space in Boston - made move to Medford with apprehension. Vastly improved operating conditions have offset location. In downtown location they did not have adequate refrigeration and were obliged to use Quincy Market Cold Storage - this tied up trucks in heavily congested area. Operating in a 75-year old mill building, difficulties were experienced in maintaining temperatures in refrigerators. In present quarters, firm has adequate refrigeration, no longer rents space in public warehouse. Energy charges per ton of refrigeration are considerably less; also insurance and trucking costs. This firm is happy in its new location.

Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	New England Provision Company	
Address	27 Fulton Street	960 Massachusetts Ave.
Business	Sausage and processed meat	
Floor Area Occupied	22,740 sq. ft.	56,000 sq. ft.
No. of Floors	5 and basement	2 - partial basement
Floor Load	-150	250+
Stud	9½'	10-12'
Elevators	2 freight	2
Rail	No	Yes
Heated	Yes	Yes-Air Conditioned
Platform loading	No	Yes
Rent per sq. ft.	65¢	\$1.20 (est.)
Sprinkler	No	Yes

Remarks: Information from Mr. Milton Berger, General Manager. Firm had plans for moving and expanding several years ago. They were badly crowded and operating very inefficiently in the market district. They strongly supported the plan of the Massachusetts Market Authority for creating a vast wholesale market in the Southamton-Massachusetts Avenue district, despite the fact that the plan conflicted with the firms selected location. Cost of site was about \$60,000 for 100,000 sq. ft. and building construction cost about \$430,000. Building is of two stories, with about 8,000 sq. ft. of basement, the latter devoted to boiler room and maintenance.

In the old location the firm was badly crowded, had no room for expansion, inadequate facilities for storage and refrigeration, receiving and shipping problems created by traffic congestion and lack of platforms a daily worry, insurance costs were high, pilferage and spoilage were regular sources of loss. Present quarters were designed after visits to other cities and new Plants, and every modern device and machine used in the industry incorporated into the new building. Building and platforms cover about 30% of lot. Receiving dock has space for four trucks and two railroad cars, shipping platform is covered, with space for 10 trucks. With adequate space, firm was able to engineer for far more efficient operations in every stage of manufacturing of product. Storage space is sufficient to maintain regular production despite fluctuations in the market demand. Building has terrazzo floors in the lobby, locker rooms, cafeteria; asphalt tile floors in offices, and special type brick in space used for boning, mixing, curing and packing of product. The dollar difference in rent or cost of ownership is estimated at \$52,500 per annum. The firm believes these costs have been offset by the numerous economies in receiving, shipping, increased efficiency in manufacturing processes, increased production per worker, reduction in loss due to spoilage and pilferage, greatly reduced insurance costs and higher morale of employees. The firm is happy in its new location.

Central Artery Displacement

	<u>Former Location</u>	<u>New Location</u>
Firm	LOAN ELECTRIC SUPPLY COMPANY	
Address	52 Purchase Street	385 Northampton Street
Business	Electrical supplies	
Floor Area Occupied	19,150 sq. ft.	9,000 sq. ft.
No. of Floors	4 and basement	1
Floor Load	-125 lbs.	250+
Stud	12'	13 $\frac{1}{2}$ '
Elevators	1 freight	None
Rail	No	No
Heated	Yes	Yes
Platform loading	No	Yes
Rent per sq. ft.	65¢	95¢
Sprinkler	No	Yes

Remarks: Dollar difference in rent = savings of \$3900. Firm acquired parcel of 20,000 sq. ft. of vacant land, formerly used as off-street employee parking facility for nearby plant, for \$8,000 in November of 1951. Constructed a one story, steel frame, cinder block building, heavy concrete slab, set on 72 36" piles. Building set back about 24' from street has off-street parking, platform loading, and one large overhead door to permit trucks with heavy load to enter building. Paul Gens, president of firm, said that company operates more efficiently and does a greater volume of business with 9,000' of floor area on one level than in former location with 19,150 feet of space on five levels. Costs of handling, stor-

ing, insurance, trucking, heating and energy have been substantially reduced. He said firm was reluctant to move out of downtown area, but now regrets that move was not made in pre-war period. Contractors and others who purchase from firm now find it quicker to obtain supplies with less traffic and no parking problems.

D. INDUSTRIAL PRODUCTION IN NEW PLANTS

Purpose of this Survey

This survey will describe companies in various industries and of various sizes that have built new plants in the post World War II period. The advantages and savings that have accrued to these companies will be analyzed. Where possible the old factory will be compared with the new plant and the results enumerated.

Several companies have built new multi-story plants in urban areas. Their reasons for building up instead of moving out are reported.

Post war experience has shown that many companies have offset the cost of new plant with the savings realized from the operation of the new plant. While space cost is higher in new plants, the savings created by lower operating costs has in most cases more than offset the increase.

Existing Plants

In many of the larger cities today, and especially in Boston, the only type of light industrial or heavy commercial space available is in very old loft-type buildings. Technological progress has made these buildings obsolete for modern industrial operations.

Companies leasing space are usually limited to loft-type buildings that have heavy brick walls, closely spaced wooden columns, and wooden floor joists. This inefficient, poorly lighted and ventilated space was erected from forty to one hundred years ago. Quite often this space is located on upper floors with many obstacles to efficient production. Several examples of buildings for various types of industries will be cited.

1. The H. A. Johnson Company of Boston was located in five old buildings. Three of these buildings were eight stories and the other two were seven stories. The elevators in these buildings prevented free flow of food products and equipment in and out of the buildings. The company built a two story plant in the Brighton District with the admitted purpose of reducing handling costs and more efficient processing of their product. The new building cut handling costs over 60% and the same volume of goods are easily handled in 5% less space. Here is a company that recognized the adverse effects old buildings were having on its production and did something about it.
2. The Norgren Company of Englewood, Colorado, made seven additions to their old plant over a twelve year period. The resulting layout was not conducive to efficient production of their product, lubricating systems and components. Realizing the inefficiencies of their old plant this firm constructed a new plant which is now producing 20% more with the same equipment and manpower.
3. The F. & R. Lazarus Company of Columbus, Ohio had its warehouse located in four separate buildings scattered around the city. Delays, errors and high delivery costs resulted from this arrangement. The company erected a single warehouse a mile from downtown with railroad siding and off-street loading which resulted in a 25%

saving in handling costs and eliminated delays and errors.

Several new industries such as food processing and packaging, frozen foods, electronics, and several others have tried to utilize space in older buildings. Even though initial space costs were relatively low, They have found it uneconomical, because of building design, maintenance and repairs, lack of specialized services and high cost of building changes for special equipment such as refrigeration, machine installation, sprinkling, etc.

New Plant

The idea of a new modern plant designed for their specific operations appeals to all operating executives. They realize that the success of any company is directly proportional to the productivity of its plant. Therefore when production costs are increased by inefficient space or plant size, these executives want new space. But these operating executives don't get a new plant until they can prove a need for it to the people who put up the money - namely, the directors of the company or the financial institution with whom they do business.

A plant is less out of date in terms of age than in performance. Specifically a plant is out of date when the estimated annual saving realized by a new factory equals or exceeds the yearly cost of financing that plant. In the table (Typical Post War Plants) following this section, eleven of the twelve companies listed are realizing a substantial enough saving on new plants to be able to amortize the cost of the new plant in a relatively short time.

An article by Homer Gray, a development engineer, in Factory Management and Maintenance of April, 1950, discusses the cost of a new plant in terms of total annual payroll.

New Plant Cost

Type of Plant	Area Sq.Ft. (Thousands)	Plant Cost (Thousands)	Annual Cost (Thousands)	Annual Pay- roll(Thousands)	% of Payroll
Electric Prod.	200.	1,400	95	6,300	1.5
Machinery	38.4	340	30.2	880	3.4
Machine Shop	390	2,450	165	3,430	4.8
Tools	500	4,500	263	5,200	5.1
Gandy	52	365	31.7	505	6.3
Textiles	64	770	53.5	780	6.9
Truck Terminal	44.7	257	22.6	290	7.8

Avg..... 5.1%

In the foregoing table Plant Cost includes land engineering and construction. No machinery or production equipment costs are included. Annual cost is the yearly cost to amortize the building.

The average cost of the new plants above runs between forty-two and eighty-five cents per square foot, exclusive of overhead. Construction costs of these new plants vary between six and twelve dollars per square foot.

Do New Plants Payoff?

The detailed examples of the following companies as shown in Factory Magazine reveal that new facilities built in the post-war period have been paying off at a surprising rate and savings realized have been spectacular.

1. Bush Manufacturing Company

This company has built a new plant in West Hartford, Connecticut that has been saving the company \$50,000 per year since it was

completed in 1947. The new building was erected to increase capacity and to centralize operations. It is a one-story slab foundation plant that covers 2.5 acres on a 10-acre site. Railroad siding is provided.

The new building cost a total of \$875,000 for 110,000 sq. ft. or \$8.00 per square foot. It is proposed that the plant will pay for itself in 20 years and the annual cost is only 6.5% of the total annual payroll. The old plant contained 85,000 sq. ft. and if the annual saving is applied to it the saving is 60 cents per sq. ft. Therefore Bush Manufacturing Company could afford to pay 60 cents per square foot more for new plant space over old and realize the same profit with the same operating costs.

Production was increased 10% per man-hour and employee morale was improved because of better working conditions and generous facilities for employees. New methods were introduced and the quality of their product was improved.

The big savings were accomplished as follows:

Maintenance - down 40% Heating cost - off 30%

Handling Costs - cut 25% Shipping cost - down 25%

Work in process inventory -down 25% Lighting charges - off 10%

Insurance premiums-sliced 10% Supervision Cheaper-by 25%

There were also 30% in savings that were not anticipated when the new plant was proposed and under construction.

2. The Hallicrafters Company

A new modern plant was erected by this radio and television firm in the City of Chicago and it started operation in December,

1946. The plant is a one-story slab foundation that has footings and foundations designed to add another story when it becomes necessary to expand operations again.

The new building cost \$950,000 for 140,000 square feet of floor space or \$6.80 per square foot. It is planned to amortize the cost of the plant over a 15-year period and the savings realized from the new plant will help pay the annual cost. The previous facilities were in eight different buildings scattered around Chicago. Management gave centralization of operations as the main reason for building a new plant.

Production was increased 25% per man-hour, employee morale improved and new methods were used.

The following savings were realized:

Handling costs down 35%

Supervisions slashed 50%

Maintenance off 14%

Overall heating and lighting costs are up but cost per square foot for these services are less.

3. Bell & Howell Company

This company has been saving \$400,000 per year in its new three-story plant built in Chicago in 1946. Motion picture equipment is manufactured in this reinforced concrete building. Exterior walls create a pleasing appearance and are constructed of brick, glass block and concrete trim.

This building cost a total of \$3,000,000 for 227,566 square feet of space or \$13.00 per square foot to erect. The reasons given

by management for the erection of the new plant were (a) to centralize operations and (b) to increase capacity. The new building created a 100% increase in capacity; therefore with the saving created in the new building a rental or space cost of an additional 3.50 per foot could be afforded. This plant will pay for itself in 10 to 15 years and the annual cost will be 7.5 per cent of total annual payroll.

The tremendous saving realized has been due in part to reduced production costs such as:

Materials handling off 10%

Supervision down 5%

Maintenance slashed 15%

Process inventory off 21%

4. A. G. Spalding & Brothers Inc.

In 1948 the Spalding firm built a new modern plant on a large tract of land in Chicopee, Massachusetts. The plant section is one-story construction while the office section has two-stories. It has railroad siding, off-street loading and parking, and all employee facilities needed in a modern plant.

The new factory was erected to centralize operations from four plant sites. This resulted in development of new processes that could not be used in the former sites. Direct savings realized were:

- | | |
|---------------------------------|-------------------------|
| 1. Materials handling - off 20% | 4. Inventory - cut 15% |
| 2. Supervision - down 10% | 5. Insurance - down 10% |
| 3. Maintenance - less 15% | 6. Shipping - off 15% |

All the above savings were realized even with an increase of 20% in capacity.

The construction costs of the new factory was \$2,400,000 for approximately 275,000 square feet of floor space or \$8.75 per square foot. When the plant was completed it was sold and then leased back at an annual rental of \$70,000 per year. The average saving realized in each year since completion has been in excess of \$200,000 per year even allowing for the rental charge.

5. Florsheim Shoe Company

The Florsheim Shoe Company was determined to remain in a downtown area of a large metropolitan city but they still wanted all the advantages of a suburban plant. This determination stemmed from the fact that their suppliers, buyers and highly skilled employees were located in the urban area.

The company located its plant at Adams and Clinton Streets, close to the core of downtown Chicago. The plant was built up to overcome higher land costs. Design-wise it looks more like an office building than a factory.

The downtown location presented several problems which were satisfactorily solved in the following ways:

- a. the space problem was solved by building up six stories;
- b. the flow problem was solved by both vertical conveyors (from floor to floor) and horizontal overhead conveyors which could be installed because of 11 ft. 3 inch clearances on each floor;

- c. the trucking problem solution was solved by basement loading docks;
- d. the recreation problem will be solved on the deck over the first floor and between the building U by developing a roof garden play area for employees;
- e. the illumination problem was solved by floor to ceiling glass curtain walls which are permitted by the type of building construction, plus proper fluorescent lighting at each working position.

This company has all of the advantages of a one-story suburban plant site plus the advantages that accrue to it from its downtown location. It has solved all internal plant problems with new ideas in plant construction and operation based on older and proven techniques.



TYPICAL POST WAR PLANTS

<u>INDUSTRY NUMBER</u>	1	2	3	4
Building Cost	200,000	200,000	616,267	875,000
Annual Savings	240,000	8,000 to 10,000	30,000	50,000
Materials Handling	↓	↓20%	↓25%	↓25%
Supervision	↑	•	→	↓25%
Maintenance	↓	↑	→	↓40%
Inventory	→	↓5%	↓15%	↓25%
Shipping	↓	↓20%	↓25%	↓25%
Insurance	↓	↓25%	↑35%	↓10%
Lighting	→	↑	↑12%	↓10%
Heating	↓	↓5%	↓2%	↓30%
Amortization Period	8½ years	25 years	10-15 years	20 years
Output per man hr.	100%	10%	7%	10%
Annual Cost as a % of payroll	5%	12%	6.5%	6.5%
Employment Moral Improved?	Yes	Yes	Yes	Yes
Any New Methods?	Yes	•	Yes	Yes
Has Quality Improved?	•	Yes	No	Yes.
Extra Savings Not Expected?	None	•	No	Yes 30%
Increase in Capacity	50%	50%	•	15%
Reasons for Building Better Location, Power, and Freight Costs		•	•	Increase Capacity, Centralize Operations

Legend

↑ Up

→ Same

↓ Down

• No Answer



<u>INDUSTRY NUMBER</u>	5	6	7	8
Building Cost	900,000	950,000	1,300,000	1,500,000
Annual Savings	40,000	•	None	•
Materials Handling	↓ 20%	↓ 35%	↓	↑
Supervision	↓ 10%	↓ 50%	→	↑
Maintenance	↑ 15%	↓ 14%	↓	↑
Inventory	↑ 10%	→	↓	↑
Shipping	↑ 15%	↓	→	↑
Insurance	→	↓	↓	↑
Lighting	→	↑	↑	↑
Heating	↑ 40%	↑	→	↑
Amortization Period	8 years	15 years	12 year	•
Output per man hr.	None	25%	10%	8%
Annual Cost as a % of Payroll	•	•	10%	6.9%
Employment Moral Improved?	Yes	Yes	Yes	Yes
Any New Methods?	Yes	Yes	Yes	No
Has Quality Improved?	Yes	•	Yes	Yes
Extra Savings Not Expected?	Yes 10%	•	No	•
Increase in Capacity	50%	50%	300%	80%
Reasons for Building	•	Centralize Operations	Increase Capacity	Increase Capacity, Centralize Operations

Legend ↑ Up → Same ↓ Down • No Answer



INDUSTRY NUMBER	9	10	11	12
Building Cost	1,884,732	2,400,000	3,000,000	6,000,000
Annual Savings	800,000	250,000	400,000	●
Materials Handling	↓	↓ 20%	↓ 10%	→
Supervision	↓	↓ 10%	↓ 5%	↓ 10%
Maintenance	↓	↓ 15%	↓ 15%	↑ 30%
Inventory	↑	↓ 10%	→	↓ 15%
Shipping	→	↓ 15%	→	↓ 14%
Insurance	↑	↓ 10%	→	↑ 10%
Lighting	↑	→	→	↑ 15%
Heating	↑	→	→	↑ 12%
Amortization Period	8 1/3 years	●	10-15 years	10 years
Output per man hour	30%	●	8%	10%
Annual Cost as a % of Payroll	2%	Sold and Leased Back	7.5%	10%
Employment Moral Improved?	Yes	Yes	Yes	Yes
Any New Methods?	Yes	Yes	Yes	Yes
Has Quality Improved?	No	●	Yes	Yes
Extra Savings Not Expected?	No	Yes 8-10%	No	No
Increase in Capacity	68%	20%	100%	50%
Reasons for Building	Modernize, Increase Capacity	Centralize Operations	Increase Capacity, Centralize Operations	Increase Capacity

Legend ↑ Up → Same ↓ Down ● No Answer

Note: Where percentages are given they are a ratio of total operating costs.

This above table shows how a dozen companies now evaluate the new plants they built in the 1946 to 1950 period. This data was given in response to a questionnaire sent out by the magazine Factory Management and Maintenance and then published in their April 1950 issue.

These are the important points:

In eleven out of twelve companies the new buildings are helping to cut operating costs significantly.

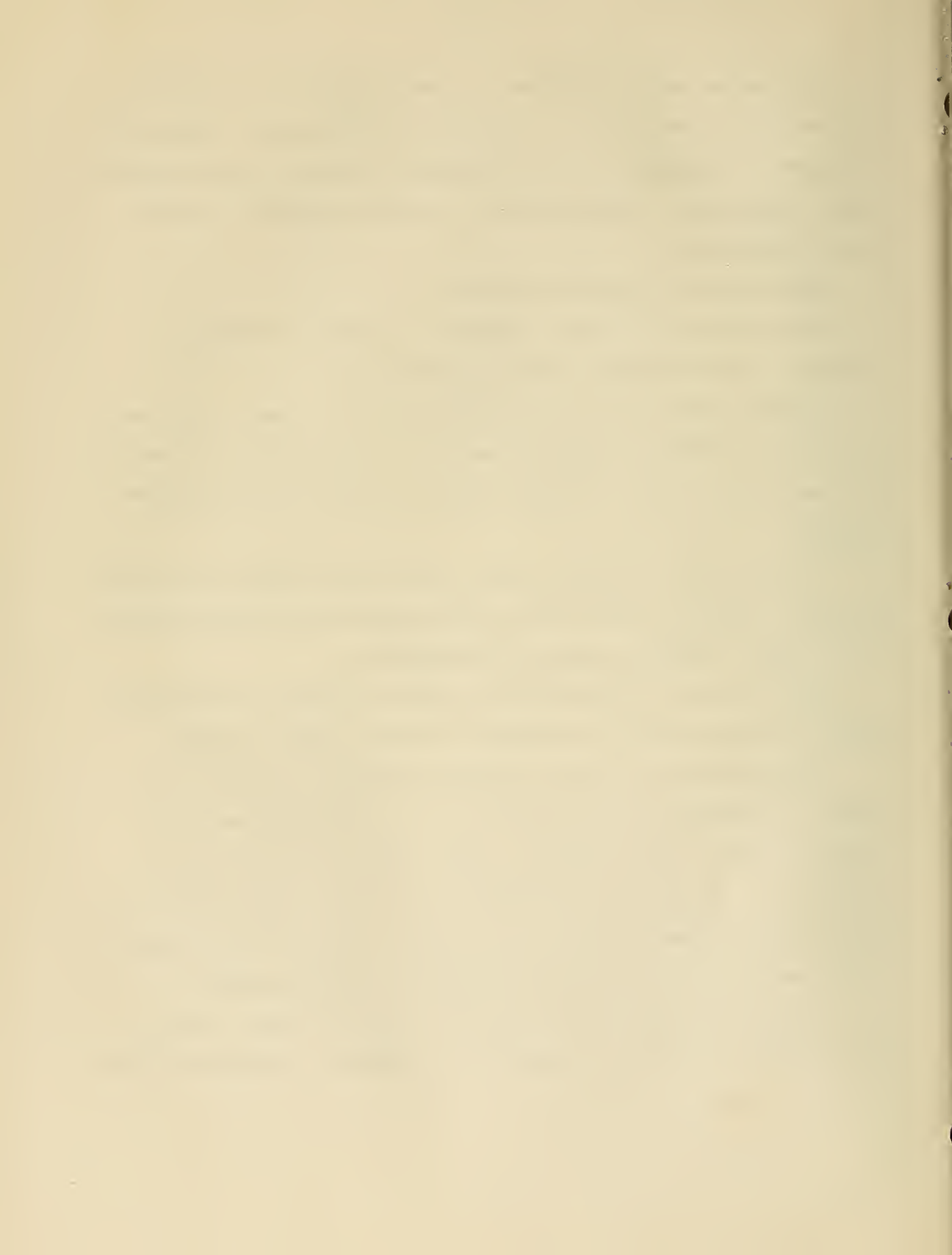
Greater floor area is the usual reason for space costs that have risen. Several companies state that the square foot cost is the same or less than in former plants, or that unit costs have dropped.

In the case of lighting, where costs have risen or remained the same, companies report they are getting more for their money i.e., better lighting at greater intensities.

More than half the plants will realize savings in operating costs to amortize their buildings in fifteen years or less.

The amortization periods may seem extremely low for this group of industries but actually it is a representative group of post war new-plant companies. The reasons for building were given to (1) centralize operations and/or (2) to expand capacity. None of these companies built to cut operating costs even though in all cases but one the owners realized definite savings.

Generous facilities are provided at most of these plants for employees, attractive construction features, and these plants



did not necessarily use the materials with the lowest initial costs. In most cases, they represent an investment far above the minimum requirements for a good substantial plant. This does not mean that these features are "gingerbread". They can mean better employee relations, better community relations, and longer useful plant life for the original investment. It is hard to figure benefits from these features in terms of money in the short run. It may be years before the effects of these intangibles are realized.

Industry realizes that new plant can cut operating costs. Statistics gathered by McGraw-Hill for capital spending by industry reveal that 65% will be used for replacement and modernization and only 35% for expansion of capacity. Thus with the above split of capital spending industry has a tremendous task ahead to bring its equipment and plant up to date.

E. BUILDING AND SPACE COSTS FOR NEW INDUSTRIAL CONSTRUCTION
IN THE BOSTON AREA

A study of new plant construction costs in the Boston area was undertaken by the staff of the Urban Redevelopment Division to determine the rent or cost of ownership as compared to prevailing rents being asked in existing buildings.

The post-war period has seen a continuing high rate of new non-residential construction in the Boston area. A good deal of this new plant construction has been by firms relocating out of the downtown area in order to obtain room for expansion, modern facilities and to escape the crowded traffic-congested sections of the city. In 1952, for the Boston area, F. W. Dodge Company reports \$30,809,000 of new non-residential construction, and for the first six months of 1953, \$15,604,000.

There has been very little new space built for rental purposes, but a considerable amount of build and lease-back contracts have been negotiated in recent years. Under this arrangement, a firm acquires a site and builds to its own requirements and specifications and upon completion sells to an institution or insurance company with a lease-back arrangement. A strong signature and good credit rating are essential in this type of operation. Leases are generally written for a 20 year period, with an option to renew. The lessor obtains a return of about 5% and the total cost is amortized over a 20 year period. The lessee assumes all taxes and maintenance costs excepting major structural repairs or improvements. Lease renewals after the first twenty years are at a greatly reduced figure, as the owner will have recovered the original investment.



Financing for the lease-back method is readily available. There are firms and individuals who are known to be offering attractive leases on new construction to strong firms on long leases. One example of this,- a well known paper firm now located on Atlantic Avenue, occupying space in a 6-story loft building which may be acquired by the State in Central Artery takings, was offered a new building, first class construction, heavy floor load, 14' stud, rail siding, 50% lot coverage in the Brighton district at 90¢ per foot, with the lessee to assume any increase in taxes over the 1953 rate. The firm is presently paying 65 cents a square foot in a loft building 80 years old, with no off-street loading or parking facilities.

The examples of new construction listed on the chart (Exhibit E) are representative of the post-war activity in this area. From this chart it may be seen that space in new plants, built and designed for the occupant, is available for as low as 89¢ per foot. One large realtor reported that he had recently constructed a new one-story building to rent for 75¢ per foot,- cinder-block construction with heavy floor load, to be used by a distributor. The building was a simple shell, with a minimum amount of electrical, heating and plumbing and only a small office area.

There has been no new construction of multi-story building except for one and one-half and two stories.

No new manufacturing, warehousing or industrial facilities have been built in the central downtown business district in the past few years because of the lack of suitable vacant land.

In the chart attached hereto (Exhibit E) all construction has taken place in the past five years.

The figure shown as the cost of ownership or rent equivalent, has been computed on a 20 year amortization at 5%, with the taxes at 1952 rates and allowing for 7% return on equity. Charges for heat and water are not included, and expenses for normal repairs, maintenance and replacement are excluded.

The experience of the Recording and Statistical Corporation is an excellent example of a firm which moved to a new location in Boston in order to provide modern plant, off-street parking and loading and to escape from costly congestion. This firm was formerly located in downtown Boston in two loft buildings. They were crowded in on the fringe of the retail shopping district among the garment leather and textile firms. They acquired three acres of vacant land at Columbia Circle, constructed a new building, designed and engineered for their operations, covering 25% of the lot area. The building is set back 60' from the road, is attractively landscaped, has ample parking facilities, off-street loading, and affords excellent identity. The cost per square foot of floor space is about \$1.20 per annum. This plant is approximately three miles from the center of the city, and located close to Columbia Station on the rapid transit to downtown Boston.

Recently, two of Boston's newspapers have announced plans to move out of their present locations on Washington Street in the heart of the city. One paper, the Boston Globe, plans to build a new plant close to Columbia Circle, where they will have the

advantage of rail siding for handling newsprint, along with adequate space, good roads, off-street loading and parking and proximity to the rapid transit.

III. Conclusions

An analysis of the studies outlined above establishes the fact that there is a demand for centrally located industrial land in Boston and that the New York Streets Project area is marketable.

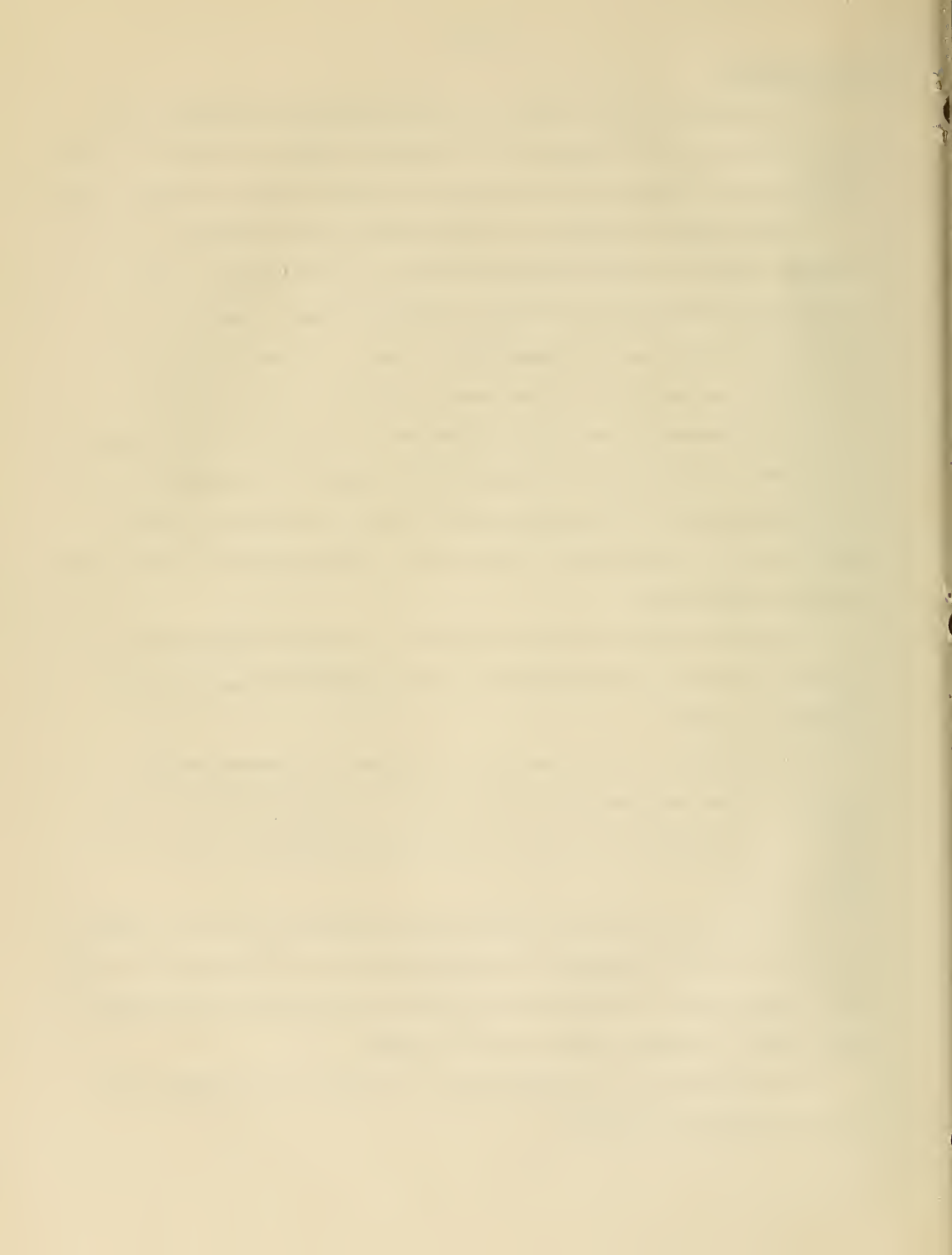
The extensive program for improvements and expansion of the highway system, public transportation, port of Boston, airport and parking facilities will have a great economic impact on the growth of Boston and the demand for land. The large amount of industrial property which has been eliminated by the Central Artery displacement and to be eliminated by the Artery and other development programs will increase the demand for industrial land in Boston where at the present time there is relatively only a small supply of industrial land which is inadequate for the normal growth of the city.

Boston's position as the center of a large metropolitan area and the trading and business hub of New England strengthens the demand for land.

The concept of marketability includes the demand factor. A product is not marketable unless there is a demand for it. However, it is possible to have an unmarketable product where a demand exists.

In the case of the New York Streets Project Area, the demand for land in Boston enhances the marketability of the project area, and in many ways, the factors which make the project area marketable create a greater demand for the area.

The discussion of marketability for this area is based upon the following assumptions:



- 1) there is only a limited amount of land in the project area for disposal - approximately 16 acres;
- 2) the potential redevelopers will be only those firms who do not require one story plants in order to operate economically, other things being equal;
- 3) the potential redevelopers will be only those firms whose operations are more profitable in close-in locations. The locational advantages of proximity to downtown are more important to these firms than the cost of land ~~or~~ tax structures, other things being equal.

The factors which make the project area marketable are:

- 1) there are no competitive vacant land sites in Boston of comparable size which are centrally located or close-in to the heart of the city;
(outlined above in I B)
- 2) new plants can be constructed to compete favorably with prevailing industrial rents for available space;
(See II A and II E above)
- 3) new plants increase industrial productivity and the operational savings amortize the cost of new plants and in most cases more than offset the increase in space costs; See II D and II C above.

In the judgment of the Authority, these studies demonstrate that there is, and will be, a ready market for land in the New York Streets area. Leading brokers, realtors, railroads

engineering firms and business houses were contacted personally in the course of these studies. It was the consensus of opinion that this land would be in demand, and that in the city at the present time there was no tract of comparable size possessing the advantages of this site.

This Authority contends that the New York Streets area, after clearance and site preparation with adequate streets and utilities, and after its disposal for industrial re-use of a restricted type with controls to maintain off-street parking and loading, reasonable land coverage, and adequate circulation, will become a prime, centrally located, close-in industrial site with proximity to a new central artery, to railroad depots, airport, hotels, banks and excellent public transportation facilities with a large, skilled labor pool available nearby. These important advantages in addition to all the advantages present in the outlying sites, establish the fact that this area will be in demand by firms who enjoy a distinct operational advantage by virtue of a close-in location.

